REMARKS

I.   Status of the Application

Claims 1-20 are pending in this application. Claims 19 and 20 have been

withdrawn from consideration. In the January 13, 2005 office action, the Examiner

rejected claims 1-18 under 35 U.S.C. §103(a) as allegedly being unpatentable over

Applicant's admitted prior art ("Admitted Art") in view of United States Patent No.

5,560,038 to Haddock (hereinafter "Haddock").

In this response, Applicants respectfully traverse the rejections of claims 1-18 and

respectfully request consideration of the application in light of the following remarks.

II.   Claim 1

Claim 1 stands rejected as allegedly being obvious over Admitted Art in view of

Haddock. As will be discussed below, there is no legally sufficient motivation or

suggestion in the art to modify the "teachings" of the Admitted Art as alleged by the

Examiner. Accordingly, it is respectfully submitted that the rejection of claim 1 is in

error and should be withdrawn.

A.   The Present Invention

Claim 1 is directed to a method for communicating information between a

plurality of local area network sections having different transmission speeds. The

plurality of local area network sections employ a physical layer protocol in which an

unsuccessful transmission is communicated to a transmission source prior to completion of the transmission. The method includes a step of receiving, within the physical layer protocol, a packet that is transmitted from a source terminal in a source network section having a source transmission speed to a destination terminal in a destination network section having a destination transmission speed. The destination transmission speed differs from the source transmission speed. The method also includes determining the transmission speed for the destination terminal, and re-transmitting, within the physical layer protocol, the received packet to the destination network section at the destination transmission speed.

Thus, the above invention transmits packet information between two different networks that employ different transmission speeds, and does so within the physical layer protocol.

B.   Admitted Art

The admitted art describes a switch interface unit that allows multiple LANs to be connected at the physical layer. The switch interface unit obtains a destination address from a received packet, determines if there is activity on the LAN of the destination address, and sends a collision to the source of the packet if the destination is busy, all before the source finishes transmitting the packet. The Admitted Art presumes that the source and destination LANs have the same data speeds.

C.   Haddock

Haddock teaches a translation engine for translating frames of data from one frame format to another frame format. The translation engine has a variable length data pipeline capable of maintaining a constant synchronous data stream comprising frames of data from the input to the output of the data pipeline. Haddock employs the technology specifically in a packet layer switch. (Haddock at col. 6, lines 14-19; col. 7, lines 3-9).

D.   No Motivation to Implement MAC Layer Operations of
        Haddock in the Physical Layer Switch of the Admitted Art

There is no motivation or suggestion found within Haddock to modify a physical layer internetwork switch to incorporate features of a MAC layer switch. The requirements of switching and communicating at the physical layer and packet layer are substantially different. Thus, there is no motivation or suggestion within Haddock to modify the switch interface unit of the Admitted Art to switch packets between networks of different speeds at the physical layer.

In particular, the type of data translation operations taught by Haddock are not compatible with data retransmission within the physical layer protocol because the Haddock switch is a *store and forward device*. Store and forward devices such as MAC switches do not switch data at the physical layer. Instead, the MAC switch of Haddock tears apart each frame of data and regenerates a new frame. (See Haddock at col. 9, lines 20-38). Moreover, Haddock specifically identifies that the device disclosed therein is a "data link layer" device, and not a physical layer device. (*Id.* at col. 8, lines 28-50).

Haddock provides no teaching applicable to a physical layer device with respect to the translation of data speeds. Accordingly, one of ordinary skill in the art would not

be motivated by Haddock to modify the Admitted Art device as proposed by the Examiner because one of ordinary skill in the art would have no suggestion on how to carry out such a modification.

In the Office Action, the Examiner provided the following reasoning for modifying the Admitted Art:

> Haddock teaches the destination transmission speed differing from the source transmission speed, b) and c) in col. 3, lines 13-29 . . . At the time the invention was made, one of ordinary skill in the art would have been motivated to determine the transmission speed for the destination terminal and re-transmit, within the physical layer protocol, the received packet to the destination network section at the destination transmission speed in order to interconnect heterogeneous networks that operate at different transmission speeds, therefore maximizing the throughput of the data transmission.

(Office Action at p.3).

Haddock does not address the particular requirements of performing a switching operation in the physical layer, much less physical layer switching operations between networks using different speeds. Haddock, and the prior art cited in the background section of Haddock, relates to packet layer switching. There is no teaching or suggestion that *any* of the novel techniques of Haddock could be implemented in a physical layer switch such as that of the Admitted Art.

Moreover, Haddock teaches away from the present invention by suggesting that buffering *more* frames is advantageous. In particular, Haddock discusses a prior art *packet layer switch* as having a disadvantage because it does "provide for buffering for any frames of data". (Haddock at col. 5, lines 44-46). If Haddock cites such a disadvantage of other packet layer switches (which do store and forward packets), Haddock certainly would teach away from the Admitted Art switch that does not even store and forward packets.

Accordingly, it is respectfully submitted that there is no legally sufficient motivation or suggestion to modify the physical layer switch of the Admitted Art to carry out the packet layer switching operations of Haddock, as proposed by the Examiner. As a consequence, it is respectfully submitted that the obviousness rejection of claim 1 is in error and should be withdrawn.

III.   Claims 2-10

Claims 2-10 also stand rejected as allegedly being obvious over the Admitted Art in view of Haddock. Claims 2-10 depend from and incorporate all of the limitations of claim 1. Accordingly, for at least the same reasons as those set forth above in connection with claim 1, it is respectfully submitted that the rejection of claims 2-10 over the prior art should be withdrawn.

IV.   Claim 11

Independent claim 11 also stands rejected as allegedly being obvious over the Admitted Art in view of Haddock. As with claim 1, the Examiner relies on the teachings of Haddock to modify the switch of the Admitted Art to incorporate the ability to switch data between networks having different transmission speeds. As discussed above, one of ordinary skill in the art would not, and likely could not, modify a system such as that of the Admitted Art (physical layer switch) with the store and forward operations of the Haddock switch (link or packet layer).

Accordingly, because there is no legally sufficient motivation or suggestion to combine the Admitted Art and Haddock as proposed by the Examiner in the rejection of

claim 11. As a consequence, it is respectfully submitted that the obviousness rejection of claim 11 is in error and should be withdrawn.
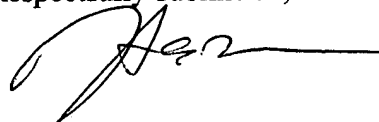
V. Claims 12-18

Claims 12-18 also stand rejected as allegedly being obvious over the Admitted Art and Haddock. Claims 12-18 depend from and incorporate all of the limitations of claim 11. Accordingly, for at least the same reasons as those set forth above in connection with claim 11, it is respectfully submitted that the rejection of claims 12-18 over the prior art should be withdrawn.

VI. Conclusion

For all of the foregoing reasons, it is respectfully submitted the applicants have made a patentable contribution to the art. Favorable reconsideration and allowance of this application is, therefore, respectfully requested.

Respectfully submitted,

Harold C. Moore
Attorney for Applicants
Attorney Registration No. 37,892
Maginot Moore & Beck
Bank One Center Tower
111 Monument Circle, Suite 3000
Indianapolis, IN 46204-5115
Telephone: (317) 638-2922